posts that address problems of inner cities—for example, homelessness and drug misuse. We have been able to extend training based in general practice within the three year scheme when necessary.² Research by the South London Organisation of Vocational Training Schemes has shown that many registrars do not feel ready to enter general practice after vocational training (C Vaughan, personal communication). We provide a fourth year of training in the form of a vocational training associate scheme, which addresses registrars' further learning needs while giving them time to gain experience and confidence in practice. This initiative, in its second year, has also been able to support 34 local practices under stress.

These changes have allowed us to recruit a full complement of high quality registrars to our schemes and increase the number of locally trained doctors becoming principals in south London. The training issues have become too complex to be solved by appending general practice training to hospital training. We look forward to the results of the evaluation of our innovations. These results will inform the debate about developing excellent training for general practice that will supply highly trained general practitioners for inner cities into the next century.

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Florence Nightingale's fever

EDITOR,—No one doubts that Florence Nightingale's illness was at least partly the consequence of her attack of "Crimean fever" in 1855. There have been many suggestions about the causal organism for this fever, and *Brucella melitensis* is as convincing as any,¹ though Miss Nightingale herself claimed that the fever was typhus.²

What has intrigued historians is why she stayed in bed, or on a couch, for over 20 years. The short answer is that this was the treatment prescribed and that she acquiesced. The reason for the apparent long term illness has interested scholars for years. While lecturing in North America on "Florence Nightingale and the nursing legacy"³ I met Dr Byron Marshal Hyde in Ottawa; he is an authority on myalgic encephalomyelitis and is convinced that it was the basis of Miss Nightingale's invalidism. I thought that the volume of work that she undertook from her bed made this unlikely.

On the same tour I was shown a paper claiming that Miss Nightingale's malady was due to lead poisoning incurred as a child in Derbyshire,⁴ that she had been "a sickly child," and that she had said that she had been unable to write until she was 11. Knowing Miss Nightingale's propensity to exaggerate and that examples of her letters as a young child exist, I regard this with suspicion. Another, and more bizarre, suggestion said to emanate from Canada was that Miss Nightingale contracted syphilis in the Crimea.

Cook, her official biographer, consulted doctors and thought that "though she worked like Hercules she suffered from dilatation of the heart and neurasthenia."⁵ Smith, who did not like his subject and was bent on destroying her reputation, saw her as a malingerer.⁶ Pickering, in his book about

eminent Victorians who "took to their beds" and then led creative lives, saw a psychosomatic element.⁷

There is a strong case for suggesting that once she became bedridden Miss Nightingale manipulated her illness and those around her to get work done. A series of "last letters" concentrated minds wonderfully. Anyone who has spent long periods with her letters will conclude that she was inclined to dramatise everything, including her illness. Dramatisation often, however, paid dividends in pursuit of a cause such as the reform of army welfare, medical statistics, the poor law, midwifery, hospital architecture, and nursing.

The conclusion must be that, like so much Victorian illness, Miss Nightingale's was multifaceted and compounded by the advice and treatment of the day.

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Men's health: don't blame the victims

EDITOR,—Sian Griffiths highlights some discrepancies between men's and women's health.¹ She states that men are less able than women to recognise physical and emotional distress, apparently because of "society's expectations," and that when men are ill they are less likely to consult their general practitioners. The subtitle of her editorial implies that this is because of men's "unwillingness to seek medical help." This is blaming the victim. An editorial about, say, sexual assault on women and their unwillingness to seek medical help would have highlighted aspects of the health service that put these women off. Yet Griffiths ignores health professionals' attitudes that may contribute to men not seeking help. In child health, fathers' concerns and feelings and the concomitant psychological and health consequences often seem to be ignored by health professionals. The professionals say that "every mother is concerned for her child" and talk of "a mother's worst nightmare" and the effects of rearing children on the health of the mothers. Some recent examples reflect this.

● A specialist counsellor said that counselling men was often difficult because they did not express their feelings; she believed that this was the men's fault

● A distressed father who was not coping with his first baby when his wife returned to work was greeted by unnecessary comments at (mothers') support groups such as, "We don't often get fathers here"

● A discussion on the health and emotional needs of parents of young babies focused exclusively on mothers. When I raised the needs of fathers someone commented, "We can check their prostates," to much guffawing from colleagues.

In the week after this last comment I met a 21 year old father who had a criminal record and was in an alcohol rehabilitation programme run by a charity, a father with postnatal distress, and the family of a 25 year old man who had committed suicide; none of the men had received support

from the health service. Increases of 78% in the suicide rate among men aged 14 to 24 and of 33% among men aged 14 to 44 between 1980 and 1990² show that many men have felt marginalised by the health service. Unsafe attitudes like these mean that half the population of Britain is being denied equitable health care.

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Ethnic differences in outcome of serum screening for Down's syndrome

Differences in median values may account for differences in false positive rates

EDITOR,—Lucy Gilbert and colleagues report that serum screening for Down's syndrome had a higher false positive rate in women of Indian Asian origin than in white women.¹ They speculate that racial differences in the median concentrations of the biochemical markers used may explain this finding. Evidence from our laboratory indicates that this is at least part of the reason.

Samples from Indian Asian ethnic groups account for 25-30% of those received by our laboratory for assessment of the risk of Down's syndrome. Between October 1992 and December 1994 the false positive rate for the Asian population (7.6%) was considerably higher than that for the white population (4.2%). Medians specific to ethnic groups were therefore determined by log linear regression (weighted) for 15-20 weeks' gestation. They were based on 5837 samples obtained during the second trimester (1765 from Asian and 4072 from white women), which were assayed for α fetoprotein and intact human chorionic gonadotrophin (Wallac Delfia kits). Gestational ages were determined by ultrasonography in all cases. The median α fetoprotein concentration was not appreciably different between the two groups, but the median human chorionic gonadotrophin concentration was higher in the Asian than the white women at all gestational ages in the range 15-20 weeks (table 1).

Table 1—Median concentrations of human chorionic gonadotrophin in Asian and white women at 15-20 weeks' gestation

Gestation (weeks)	Median human chorionic gonadotrophin (kU/l)	
	Asian women	White women
15	29.3	25.0
16	25.2	21.8
17	21.7	19.0
18	18.7	16.6
19	16.1	14.4
20	13.9	12.6

Our findings show that if median concentrations of human chorionic gonadotrophin were derived from a mixed population of Asian and white women this would result in the use of inappropriately low median values for Asian women and inappropriately high values for white women. The bias would be particularly pronounced for Asian women owing to the greater contribution made to the median values by the larger white population. This would lead to the higher false positive rates that we and Gilbert and colleagues observed in Asian women. Amniocentesis might be offered inappropriately to Asian patients while being denied when appropriate to a section of the white population.

Our data suggest that the ethnic origin of populations should be considered when median data are constructed for analysis of the risk of Down's syndrome.

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For appreciable ethnic differences in false positive rates, use different cut off points

EDITOR,—Lucy Gilbert and colleagues report ethnic differences in biochemical screening for Down's syndrome and the relative ineffectiveness of the programme in Indian Asians.¹ At national meetings of the Association of Clinical Biochemists we presented our findings on the ethnic differences in maternal serum α fetoprotein and free β human chorionic gonadotrophin concentrations² and the differences in false positive rates in the various groups, which remain unchanged even after the use of "ethnospecific" medians.³

The false positive rate was highest in Afro-Caribbean women (9.2%; n=185) and lowest in white women (4.6%; n=328), with that in South Asian women being between the two (6.3%; n=315). Since then we have re-examined our database as we have acquired considerably more data. Contrary to our previous findings, while the false positive rate remains highest in Afro-Caribbean women, it is slightly lower in South Asian women than in white women. The false positive rates remain essentially unchanged, as before, after use of ethnospecific medians (table 1). The reason for this difference in the false positive rate in the South Asian women is not clear and could be the considerably smaller numbers we had at the time.

Reports suggesting that the incidence of Down's syndrome is low in South Asians, even after migration,⁴ seem consistent with our findings. We remain unconvinced that the detection rate (0/2) found in "Indian Asians" by Gilbert and colleagues is sufficient for it to be concluded that screening is ineffective in these women. Our data do not support this view. The low incidence of trisomy in South Asian women, if confirmed, might be a more convincing argument for abandoning biochemical screening in these women. More information about the true incidence of trisomy in South Asians in Britain is necessary before any major changes in screening strategies are undertaken.

The differences in false positive rates are probably due to different curve parameters for α fetoprotein and human chorionic gonadotrophin in normal and Down's syndrome pregnancies in different ethnic groups. We recommend that laboratories serving multiracial populations should examine the false positive rates separately in the different ethnic groups as the average rate might be misleadingly low; when there are appreciable ethnic differences in the false positive rates they should consider using different cut off points, particularly in Afro-Caribbean women, to avoid subjecting these women to unnecessary anxiety and invasive investigations.

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Table 1—Ethnic differences in biochemical screening for Down's syndrome*

	White women (n=1485)		South Asian women (n=1511)		Afro-Caribbean women (n=887)	
	AFP (U/ml)	HCG (ng/ml)	AFP (U/ml)	HCG (mg/ml)	AFP (U/ml)	HCG (ng/ml)
Weeks' gestation:						
15	22.9	18.1	20.8	16.7	26.7	18.0
16	26.4	14.3	24.3	13.6	30.7	15.1
17	30.5	11.4	28.4	11.0	35.4	12.7
18	35.3	9.0	33.1	9.0	40.8	10.7
19	40.9	7.2	38.7	7.3	47.0	9.0
20	47.3	5.7	45.2	5.9	54.1	7.6
False positive rate (%):						
Overall median	5.7		5.2		6.8	
Ethnospecific median	5.7		5.0		7.2	
No of Down's syndrome pregnancies†	2 (1.3/1000)		1 (0.7/1000)		2 (2.3/1000)	
No of cases of Down's syndrome diagnosed before birth	0		1		1	
No of unscreened Down's syndrome pregnancies	1		0		1	
Detection rate (% (No)) of Down's syndrome‡	0 (0/1)		100 (1/1)		100 (1/1)	

AFP= α Fetoprotein. HCG=Human chorionic gonadotrophin.

*Biochemical variables (assayed by Delfia α fetoprotein/free β HCG Dual, Wallac Oy, Turku, Finland) were corrected for maternal weight.

†Cases diagnosed before and after birth, including unscreened pregnancies.

‡Percentage of screened Down's syndrome pregnancies detected before birth.

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Median values and maternal weight specific to the ethnic group should be used

EDITOR,—Lucy Gilbert and colleagues report a 3.5-fold increase in the proportion of women found to be positive on screening for Down's syndrome when rates among Indian Asian women were compared with those among white women.¹ This prompted me to examine the data from Oldchurch Hospital's screening programme. Unlike Gilbert and colleagues' study, this screening programme uses α fetoprotein and free β human chorionic gonadotrophin as biochemical markers, a combination shown to give a detection rate of 75% at a false positive rate of 5%.² Screening with this test combination has been carried out in my department since 1991, and over the past four years about 50 000 women have been screened. Women are assigned to one of four ethnic groups: white, Afro-Caribbean, Asian, and oriental/others/unknown. Table 1 shows the breakdown of the screened population by ethnic group and the proportion found to be positive.

The findings in our much larger study population do not confirm Gilbert and colleagues' finding of an increased probability of a positive result of screening in Asian women. I agree that there is considerable evidence for ethnic differences in the median concentrations of the various analytes used, particularly α fetoprotein and intact human chorionic gonadotrophin in Afro-Caribbeans³ and free β human chorionic gonadotrophin in oriental women.⁴ Provided due consideration is given to using medians specific to the ethnic group that have been derived from the test population and provided due regard is taken of the maternal weight in these groups (which may vary appreciably from that in a white population), then general screening principles can be applied. As has been

shown in a large study of oriental women, provided these factors are taken into account detection rates of 84% at an amniocentesis rate of 50% are readily achievable—certainly when measurement of α fetoprotein and free β human chorionic gonadotrophin is used.

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When marginal costs and benefits should be used in screening

EDITOR,—Contrary to the statement by David J Torgerson and Anne Spencer in their article on marginal costs and benefits,¹ we did not evaluate the economic consequences of changing screening for Down's syndrome from the method based on maternal age to that based on biochemical screening. We directly estimated the cost of detecting a pregnancy in which the fetus had Down's syndrome by using biochemical screening (the triple test).²

The example that the authors give of how to use marginal costs and benefits to guide a decision on changing from one form of screening to another does not compare the cost of the two methods at the same level of detection and is therefore not an

Table 1—Analysis of screened population by ethnic group and screened positive rate

	Afro-Caribbean	White	Asian	Oriental/other/unknown	Total
Total	3054	36 720	5490	4592	49 856
No (%) positive on screening	186 (6.1)	1 899 (5.2)	302 (5.5)	266 (5.8)	2 653 (5.3)